

**ATLANTIC ENGINEERING &  
SURVEY CONSULTANTS, INC.**  
Land Surveyors - Civil Engineers - Planners

**Project Narrative**

**47.5-57 Kimball Road**

**Definitive Subdivision Under Special Permit Application**

**Cluster Residential/Common Access Driveway**

**Amesbury, Massachusetts**

**January 20, 2015**

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97 Tenney Street ~ ~ Georgetown, MA 01833  
(978) 352-7870 ~ (978) 948-7677  
FAX ~ (978) 352-9940

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*Adjacent Properties*

*Project Description*

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*Police*

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*Recreation*

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*Sediment Fence*

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*Surface Stabilization*

*Dust Control*

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*Transportation*

## **General Impacts**

# **Existing Conditions & Site Improvements**

## **Existing Site Description**

The site is located on the westerly side Kimball Road adjacent to the Arcadia Condominiums and opposite Ashley Drive. The property consists of 19.33 acres of which 5.9 acres are wetlands. The Amesbury Town Forest is opposite the northerly portion of the property. A 200 foot wide New England Power Company Easement traverses across the property from the Northeast to the southwest. The rear of the property has access to a 30 foot wide Right of Way which connects the site to Lake Attitash Road. The property is approximately 0.6 miles northerly from Route 110 (Haverhill Road). The property is moderately sloped ranging from 2% to 15%. There is an area on the southerly side of the property that is in a FEMA Flood Zone.

## **Adjacent Property**

Land use in the vicinity is residential consisting primarily of 1/2 acre to 1 acre lots, the Arcadia Condominium and City land.

Properties adjacent to the site vary from wooded lots with less than 20% disturbed areas to lots with up to 60% disturbed areas for dwelling, driveways and lawns

## **Project Description**

The property has been divided into lots on 3 separate occasions. Copies of the approved plans are included in this submission. The most recent division plan was in 2000 and showed 6 proposed lots. This most recent configuration is shown on the City Assessor Maps.

The current proposed site configuration proposes to build 8 new homes. Some of the homes will have their frontage on Kimball Road and some will be created using a common access driveway private street under the City regulations.

The 8 new house lots and the private road will encompass 3.2 acres of the 19.33 acre site. A strip of land along Kimball Road called Parcel "Y" on the plans will be deeded to the City to provide the area for the City to widen Kimball Road and to provide improved site distances along the road. The final 16.04 acres will be designated as "Open Space" and is anticipated to be deeded to the City.

The new development will create more lawn and impervious areas(dwelling, driveways and road). However, the on-site drainage system, maintaining buffers around wetlands and BMP'S will negate the developments impact on the environment and the surrounding areas.

## **City/Community Services**

### **Fire Protection**

Fire protection for the development will be provided from the City water supply through the use of the existing fire hydrant located opposite the proposed road and from a new hydrant to be installed at the end of the proposed road. At the present time no on-site alarm or warning devices are proposed.

### **Police**

The development will require similar sporadic services expected of a residential development. Residential service calls are typically infrequent and should not cause an increase of manpower requirements.

### **Recreation**

No on-site recreation is proposed within the 8 lots however 16.04 acres of the site is proposed as Open Space. This will provide significant area for hiking and other outdoor activities. The Open Space will access Kimball Road in two locations, one of which is approximately opposite the entrance to the Town forest.

### **Schools**

The proposed 8 homes will be 3 to 4 bedroom each. According to the U.S. Bureau of Census in 2013 the average number of persons per family was 3 and trending downward. Based on this census the number of additional children added to the school rolls would be 8 if all the homes had 2 adults and 16 if all the homes had 1 adult. This small number would have minimal impacts on the school system.

### **Department of Public Works**

The proposed development is planned with a 290 linear foot roadway with drainage facilities. The roadway is proposed as a private way with the homeowners being responsible for maintaining the road and drainage facilities. It is anticipated that the City will maintain the sewer, subject to the acceptance by the City. The drainage system is comprised of swales and infiltration. The drainage system will require annual maintenance and periodic cleaning of swales and infiltrators of sedimentation from decayed organic matter during the fall season. The roadway will be subject to light traffic and abuse. It is expected that the roadway surface will require little or no repair maintenance for at least 10 to 15 years. The roadway will require snow removal during the winter months. These items will be the responsibility of the lot owners. The owners may wish to make arrangements with the City to perform these items

### **Water Distribution System**

The proposed development will be supplied through a public water supply maintained by City personal. The water system will require annual maintenance comprised of flushing, hydrant maintenance and the recording and maintenance of metered use. It is expected that the water system will require no major repair maintenance for at least 30 years.

# **Physical**

## **Air Pollution**

Being a small residential development, effects on air pollution are negligible and are limited to temporary increases in exhaust emissions resulting from construction equipment during construction and permanent increases in emission from approximately 16 vehicles resulting from home ownership.

## **General Ecology**

The site is currently wooded and contains some wetlands. Over 80% of the site will remain in its current condition. The site does not support any unique hydrological or contain major botanical features.

## **Noise Pollution**

The most noticeable source of noise pollution will be the temporary increase of noise levels that will occur during the construction of the development. Upon completion of the development the primary source of noise emanating from the site will be from vehicles accessing the site. This will occur primarily during the morning and evening peak traffic hours when background levels are normally at increased levels. Additional increases will occur weekly resulting from trash pick-up and seasonally monthly fuel oil deliveries. As the expected noise levels will occur at times that background levels are increased or at infrequent sporadic times, the development will not have an adverse affect on noise pollution.

## **Soils**

Soils within the development portion of the site are classified primarily classified as "A" soils consisting of Hinckley soils as identified by the U.S.D.A. Soil Conservation Service guidelines and maps.

Soil testing was performed by Atlantic in the area of the proposed stormwater management systems and in the cul-de-sac of the proposed roadway Results from soil testing confirmed the soils as loamy sand and sand. 5 test pits were dug to an average depth of 80 to 90 inches. No standing or seeping water was observed and no mottles were present within the proposed work area. Based on the above testing, the site has soils that are suitable to support the proposed developments road, drainage and roof run-off infiltration systems. The sites soil types also permit the use of standard best management practice devises in the control of erosion and sedimentation during and after construction of the development. Refer to Sheet 2 of the plans for soil testing results

## **Surface Waters**

There is a significant Wetland Resource Area of 5.9 acres on the site. This area and the 100 foot resource area buffer zone will not be disturbed. All work required to develop the 8 lots and to build the proposed road will be completed outside of these areas. Siltation barriers as shown on the Definitive Plans will be placed during the construction process and the BMP's listed in the plans will be used to protect these areas.

## **UTILITIES AND SERVICES**

### **Storm Water**

Storm water runoff will be controlled through the use of roof infiltration systems, driveway stone trenches, rain gardens and a private roadway drainage system. The drainage system will collect runoff and will channel it through vegetated swale, a grass water quality swale into a roadway infiltration system prior to discharge. A detailed hydraulic report has been provided for review detailing the hydrological characteristics of the site and the hydraulic capacities of the proposed storm water management system. The pre-existing and post-construction run off rates, volumes and hydraulic capacities of the proposed storm water management system are detailed in the hydraulic report.

### **Water Distribution System**

Domestic water will be provided through an 6" diameter main extension of the City water system. A fire hydrant will be placed at the westerly end of the main to assist in fire protection and aid in flushing the system insuring water quality. Each dwelling unit will be serviced by a separate water service.

### **Other Utility Services**

Electric, cable and telephone services will be provided to the development through underground conduits originating at Kimball Road.

### **Sewerage Disposal**

The site will be serviced by City Sewer extensions.

### **Area Lighting**

No general lighting is proposed for the development. Sight lighting will be limited to typical doorway entry lighting and walkway post lighting typically located within single-family developments.

# **Planned Erosion and Sedimentation Control Practices**

## **Silt-Soxx**

A SiltSoxx siltation barrier will be installed along the limit of work as shown on the Definitive Plans. This will remain in place throughout the construction process and will be maintained in good condition throughout.

## **Sediment Fence**

A sedimentation fence will be constructed around any topsoil stockpiles to prevent sediment from entering undisturbed areas, abutting properties and the BVW.

## **Construction Road Stabilization**

As soon as practical after final grade is reached the roadway will be receiving a surface treatment of binder to prevent erosion and dust.

## **Surface stabilization**

Surface stabilization will be accomplished with vegetation and mulch as specified on the site plan.

## **Dust control**

Dust control is not expected to be a problem due to the small area of exposure. Should excessive dust be generated, it will be controlled by sprinkling.

# **Human Environment**

## **Proposed Construction**

Eight new residential dwellings are proposed by the development.

The proposed dwellings are not currently designed and are estimated to consist of the following:

- Building Type – Residential
- Construction – Wood Frame
- Number of Bedrooms – 3 to 4
- Floor Area – 3200 square feet
- Ground Coverage – 2600 square feet

## **Open Space**

A single contiguous Lot containing 16.04 Acres will be created in conjunction with the development.

## **Transportation**

The site is located approximately 0.6 miles north from route 110 one of the main routes in Amesbury, which allows for adequate access to transportation, educational facilities and other regional facilities without traversing other residential roadways.

# **General Impact**

The development will add eight new residential dwelling to the City of Amesbury. Impacts to Town services are primarily restricted to Education of children, the Sewer Department for maintenance of the sewer main, and the Water department for the maintenance and operation of the water system. It is not anticipated that the site will generate significant increases in additional traffic trip generation. The development of the site is designed to accommodate the existing grades and to avoid wetlands areas. The placement of the roadway is aligned to follow the existing contour to the maximum extent possible. The drainage is designed to treat and recharge surface water. Soils are well suited for the installation and treatment of treatment of drainage. In summary the development will not be detrimental to City services and will be constructed to protect the environment



# Assessor Map 60

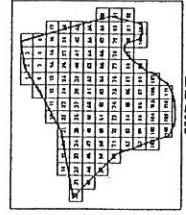


## LEGEND

- Parcel Line
- Prior Parcel Line with Common Ownership
- Parcel Number
- For Additional Parcel Information See Adjacent Sheet
- Contour Lines, 2 Ft
- Right of Way
- Town Boundaries
- Easements
- Hydrographic Features
- Streams
- Wetlands
- Exempt Lands
  - Federal
  - State
  - Municipal
  - Private

NOTE: THE AREAS, BOUNDARIES, AND DIMENSIONS SHOWN ON THIS MAP ARE DERIVED FROM AERIAL PHOTOGRAPHS, CORDS AND WILLS, AND ARE INTENDED TO BE USED FOR PROPERTY ASSESSMENT PURPOSES ONLY AND NOT FOR CONVEYANCE.

Data Source: The data for this map was supplied by the Massachusetts Valley Planning Commission, the Town of Amesbury and the Southern Office of Environmental Assessment.



## INDEX



AMESBURY, MASS.

PLAN OF LAND  
AMESBURY, MA  
THE MASSACHUSETTS COMMISSIONERS OF LANDS AND WATER  
RECORDS DEPARTMENT  
AMESBURY, MASSACHUSETTS  
1977

NOTICE  
1. THE LANDS SHOWN ON THIS PLAN ARE THE PROPERTY OF THE COMMONWEALTH OF MASSACHUSETTS.  
2. THE LANDS SHOWN ON THIS PLAN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.  
3. THE LANDS SHOWN ON THIS PLAN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.

LEGEND  
1. LANDS SHOWN ON THIS PLAN ARE THE PROPERTY OF THE COMMONWEALTH OF MASSACHUSETTS.  
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3. THE LANDS SHOWN ON THIS PLAN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.

335  
1971

PLAN OF LAND

IN

AMESBURY, MASS.

SCALE 1" = 60'

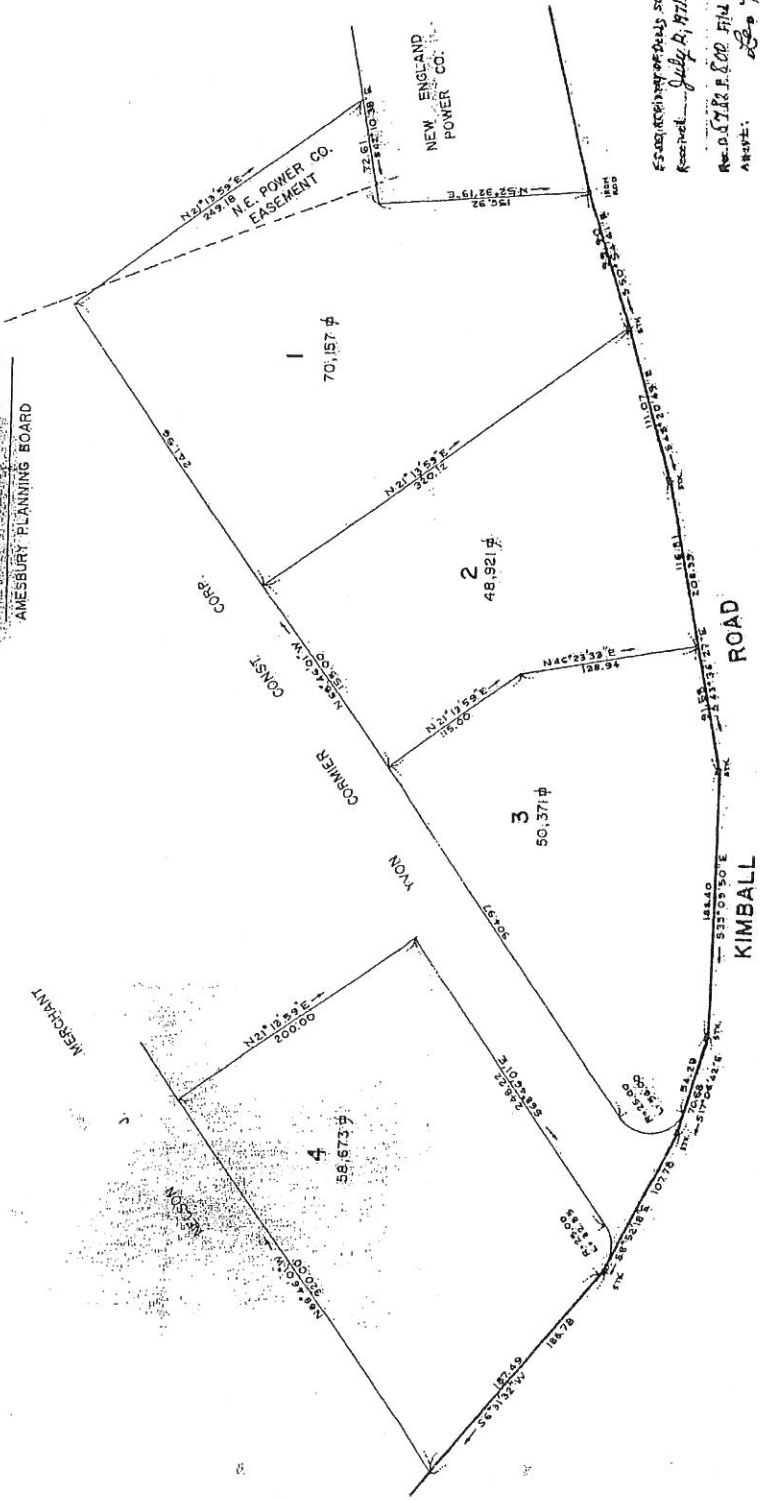
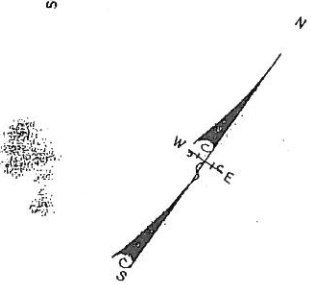
JAN. 5, 1971

DANA F. PERKINS & SONS INC.  
CIVIL ENGINEERS & SURVEYORS  
LOWELL & READING, MASS.

ATTITASH ARMS  
OWNER  
YVON CORMIER CONST. CORP.  
30 MEADOWBROOK RD.  
BEDFORD, MASS.

APPROVAL UNDER THE SUBDIVISION CONTROL LAW  
NOT REQUIRED  
DATE 1/5/71

AMESBURY PLANNING BOARD



65000 ACRES OF LAND, 50.151 ACRES OF ACRES.  
Received July 1, 1971  
Rec. D. 5122 E. 100 File No. 335-49-71  
A. H. J. Jones  
Register of Deeds  
Saged

# DEFINITIVE PLAN

## SUBDIVISION PLAN OF LAND

IN  
AMESBURY, MASS.

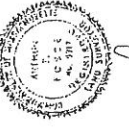
OWNERS:  
YVON CORMIER CONST. CORP.  
31 MEADOWBROOK RD.  
BEDFORD, MASS.  
SCALE: 1" = 100'  
DATE: JUNE 22, 1971  
AMESBURY PLANNING BOARD

ENGINEERS: DANA F. PERKINS & SONS INC. 43 JAKEVIEW AVE. LOWELL, MASS. REGISTERED PROFESSIONAL ENGINEERS DATE: JUNE 22, 1971	PETITION FILED
	FINAL PLAN FILED
	HEARING DATE
	PLAN APPROVED

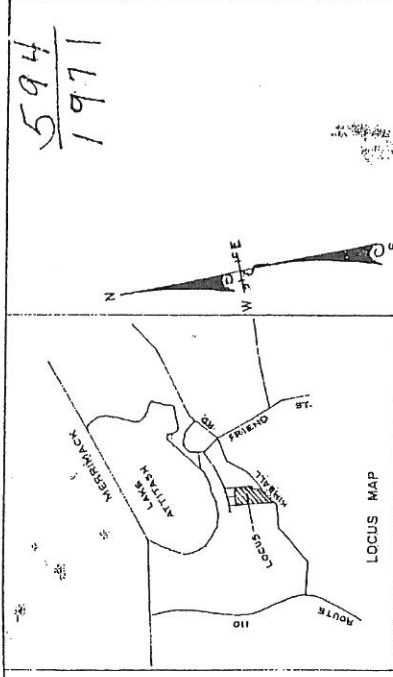
"ATTITASH ARMS"



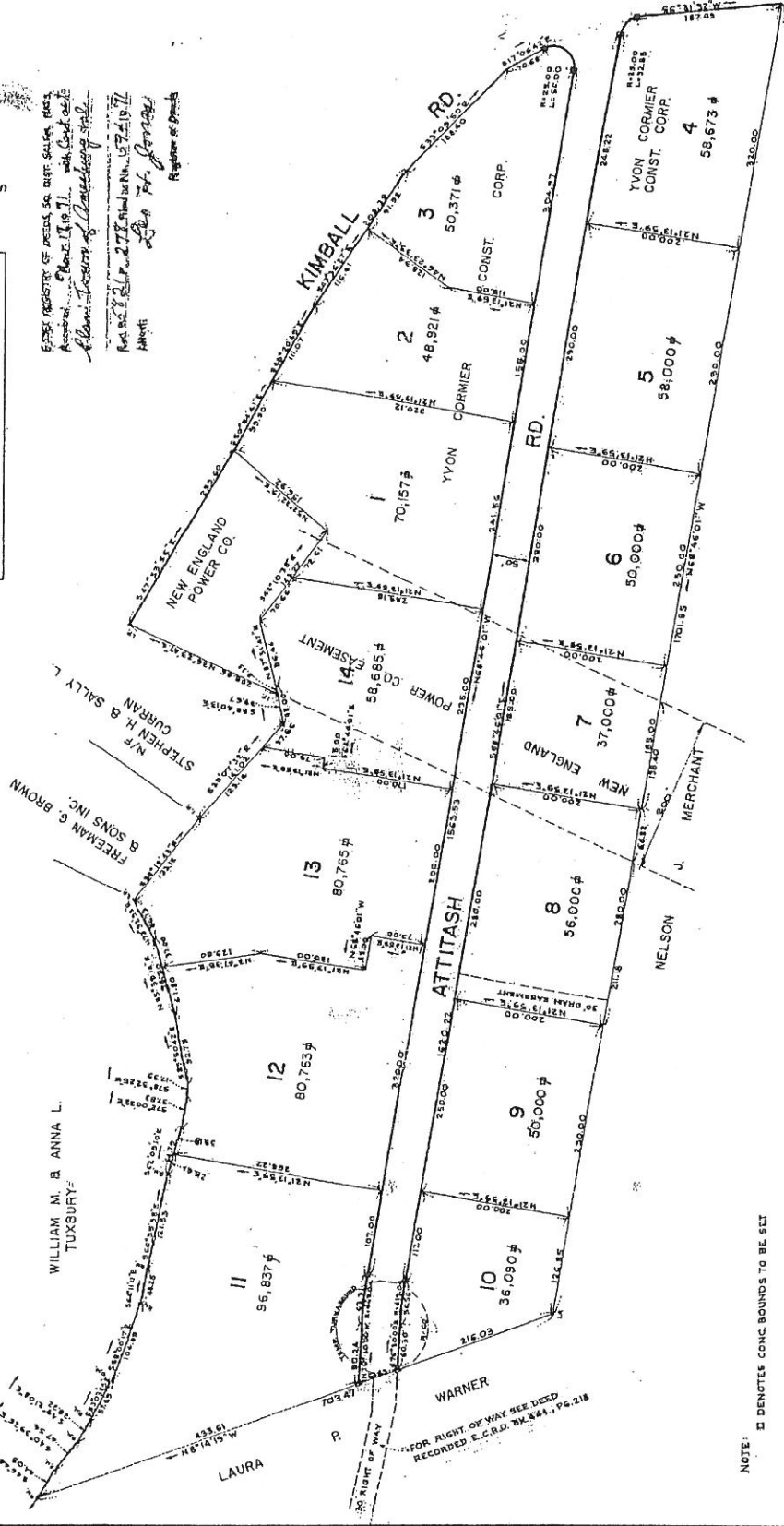
*Robert E. Blawie*  
Robert E. Blawie  
Suburban Electric B.P.E.



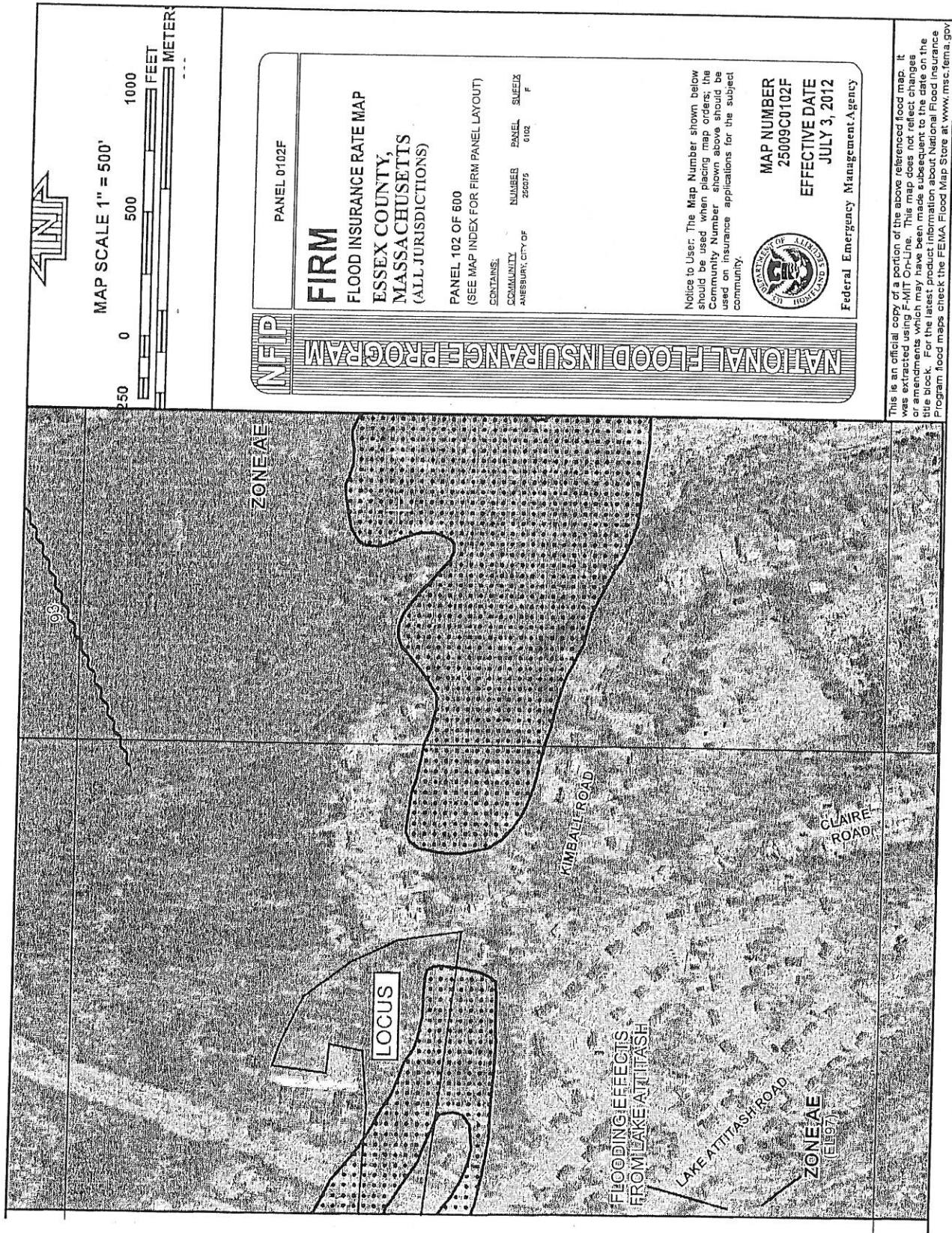
*Arthur E. Reese*  
Arthur E. Reese P.E.



STATE REGISTRY OF DEEDS SO DEPT. SULLY, REG. 2  
Approved: June 17, 1971, with Cert. of Title  
Plan: Town of Amesbury, Mass.  
Book: 273, Page 157, 158, 159  
Date: June 17, 1971  
Register of Deeds



NOTE: □ DENOTES CONC. BOUNDS TO BE SET



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**ESSEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS)**

**PANEL 102 OF 600**

**(SEE MAP INDEX FOR FIRM PANEL LAYOUT)**

**CONTAINS:**

COMMUNITY	ANNEBURY, CITY OF	NUMBERS	220715	PANEL	0102	SHEET	F
<b>MAP NUMBER 25009C0102F</b>							
<b>EFFECTIVE DATE JULY 3, 2012</b>							

**Notice to User:** The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**DEPARTMENT OF ALTIMETER**

**Federal Emergency Management Agency**

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

Fema Map

## Road & Lot Closures

### Lot name: LOT 1

North: 5011.32      East: 5071.18  
Line Course: S 48-20-49 E Length: 89.73  
North: 4951.69      East: 5138.22  
Line Course: S 43-36-27 E Length: 31.07  
North: 4929.19      East: 5159.65  
Line Course: S 43-26-43 W Length: 130.49  
North: 4834.45      East: 5069.92  
Line Course: N 47-27-06 W Length: 67.50  
North: 4880.09      East: 5020.19  
Line Course: N 21-13-59 E Length: 140.78  
North: 5011.32      East: 5071.18

Perimeter: 459.57 Area: 12,418 S.F. 0.29 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01      Course: S 12-38-28 W  
Error North: -0.006      East: -0.001  
Precision 1: 77,134.32

### Lot name: LOT 2

North: 4929.19      East: 5159.65  
Line Course: S 39-30-01 E Length: 119.57  
North: 4836.93      East: 5235.71  
Line Course: S 50-17-46 W Length: 116.85  
North: 4762.28      East: 5145.81  
Line Course: N 41-47-51 W Length: 58.07  
North: 4805.57      East: 5107.11  
Line Course: N 52-09-58 W Length: 47.08  
North: 4834.45      East: 5069.92  
Line Course: N 43-26-43 E Length: 130.49  
North: 4929.19      East: 5159.66

Perimeter: 472.05 Area: 13,572 S.F. 0.31 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.00      Course: N 88-19-29 E  
Error North: 0.000      East: 0.003  
Precision 1: 161,720.15



**Lot name: LOT 3**

North: 4836.93 East: 5235.71  
Line Course: S 39-30-01 E Length: 72.19  
North: 4781.22 East: 5281.63  
Curve Length: 49.08 Radius: 30.00  
Delta: 93-44-36 Tangent: 32.03  
Chord: 43.79 Course: S 07-10-04 W  
Course In: S 50-17-46 W Course Out: S 35-57-38 E  
RP North: 4762.06 East: 5258.55  
End North: 4737.78 East: 5276.16  
Line Course: S 54-02-22 W Length: 104.02  
North: 4676.69 East: 5191.97  
Line Course: N 28-20-23 W Length: 97.24  
North: 4762.28 East: 5145.81  
Line Course: N 50-17-46 E Length: 116.85  
North: 4836.93 East: 5235.71  
Perimeter: 439.39 Area: 12,417 S.F. 0.29 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.00 Course: S 33-12-52 W  
Error North: -0.002 East: -0.002  
Precision 1: 158,747.47

**Lot name: LOT 4**

North: 4672.16 East: 5253.84  
Line Course: N 54-02-22 E Length: 50.36  
North: 4701.74 East: 5294.60  
Curve Length: 52.09 Radius: 30.00  
Delta: 99-29-19 Tangent: 35.43  
Chord: 45.79 Course: S 76-12-58 E  
Course In: S 35-57-38 E Course Out: N 63-31-41 E  
RP North: 4677.45 East: 5312.22  
End North: 4690.83 East: 5339.07  
Line Course: S 26-28-19 E Length: 29.54  
North: 4664.38 East: 5352.24  
Line Course: S 22-01-17 E Length: 74.60  
North: 4595.23 East: 5380.21  
Line Course: S 56-50-10 W Length: 63.70  
North: 4560.38 East: 5326.89  
Line Course: N 33-09-50 W Length: 133.53  
North: 4672.16 East: 5253.84  
  
Perimeter: 403.82 Area: 10,014 S.F. 0.23 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01 Course: S 39-30-03 E  
Error North: -0.004 East: 0.004  
Precision 1: 72,201.59

**Lot name: LOT 5**

North: 4595.23      East: 5380.21  
Line Course: S 22-01-17 E Length: 88.23  
North: 4513.44      East: 5413.29  
Line Course: S 06-52-18 E Length: 45.23  
North: 4468.53      East: 5418.71  
Line Course: S 06-31-32 W Length: 29.30  
North: 4439.42      East: 5415.38  
Line Course: N 79-10-23 W Length: 149.98  
North: 4467.59      East: 5268.07  
Line Course: N 33-09-50 W Length: 45.51  
North: 4505.69      East: 5243.17  
Line Course: N 56-50-10 E Length: 65.00  
North: 4541.25      East: 5297.58  
Line Course: N 56-50-10 E Length: 35.00  
North: 4560.39      East: 5326.88  
Line Course: N 56-50-10 E Length: 63.70  
North: 4595.24      East: 5380.21

Perimeter: 521.95    Area: 15,999 S.F. 0.37 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01      Course: N 33-17-31 W  
Error North: 0.011      East: -0.007  
Precision 1: 39,793.49

**Lot name: LOT 6**

North: 4616.68      East: 4932.43  
Line Course: N 21-13-59 E Length: 64.55  
North: 4676.85      East: 4955.81  
Line Course: S 88-02-26 E Length: 109.54  
North: 4673.11      East: 5065.29  
Line Course: S 48-42-35 E Length: 30.46  
North: 4653.01      East: 5088.17  
Curve Length: 52.39      Radius: 50.00  
Delta: 60-02-00      Tangent: 28.89  
Chord: 50.03      Course: S 05-20-05 E  
Course In: S 65-19-05 E    Course Out: S 54-38-55 W  
RP North: 4632.13      East: 5133.61  
End North: 4603.20      East: 5092.83  
Line Course: S 24-56-16 W Length: 36.79  
North: 4569.84      East: 5077.31  
Line Course: S 27-50-45 W Length: 88.58  
North: 4491.51      East: 5035.94



Line Course: N 39-35-16 W Length: 162.42  
North: 4616.68 East: 4932.43

Perimeter: 544.73 Area: 18,477 S.F. 0.42 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.00 Course: N 77-27-18 E  
Error North: 0.000 East: 0.001  
Precision 1: 779,677.15

**Lot name: LOT 7**

North: 4491.51 East: 5035.94  
Line Course: N 27-50-45 E Length: 88.58  
North: 4569.84 East: 5077.31  
Line Course: N 24-56-16 E Length: 36.79  
North: 4603.20 East: 5092.82  
Curve Length: 100.02 Radius: 50.00  
Delta: 114-37-00 Tangent: 77.91  
Chord: 84.16 Course: N 87-20-25 E  
Course In: N 54-38-55 E Course Out: S 59-58-05 E  
RP North: 4632.13 East: 5133.61  
End North: 4607.10 East: 5176.89  
Line Course: S 33-09-50 E Length: 101.17  
North: 4522.41 East: 5232.24  
Line Course: S 33-09-50 E Length: 20.00  
North: 4505.67 East: 5243.18  
Line Course: S 60-43-40 W Length: 20.05  
North: 4495.87 East: 5225.69  
Line Course: S 60-43-40 W Length: 107.63  
North: 4443.24 East: 5131.80  
Line Course: N 63-16-39 W Length: 107.33  
North: 4491.50 East: 5035.93

Perimeter: 581.57 Area: 19,796 S.F. 0.45 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01 Course: S 14-38-18 W  
Error North: -0.011 East: -0.003  
Precision 1: 49,094.08

**Lot name: LOT 8**

North: 4625.77                      East: 5189.89  
Line Course: N 54-02-22 E Length: 79.01  
North: 4672.16                      East: 5253.84  
Line Course: S 33-09-50 E Length: 133.53  
North: 4560.38                      East: 5326.88  
Line Course: S 56-50-10 W Length: 35.00  
North: 4541.24                      East: 5297.59  
Line Course: S 56-50-10 W Length: 65.00  
North: 4505.68                      East: 5243.17  
Line Course: N 33-09-50 W Length: 20.00  
North: 4522.42                      East: 5232.23  
Line Course: N 33-09-50 W Length: 101.17  
North: 4607.11                      East: 5176.89  
Curve Length: 6.55                      Radius: 50.00  
Delta: 7-30-24                      Tangent: 3.28  
Chord: 6.55                      Course: N 26-16-43 E  
Course In: N 59-58-05 W      Course Out: S 67-28-29 E  
RP North: 4632.14                      East: 5133.60  
End North: 4612.98                      East: 5179.79  
Curve Length: 16.50                      Radius: 30.00  
Delta: 31-30-51                      Tangent: 8.46  
Chord: 16.29                      Course: N 38-16-57 E  
Course In: S 67-28-29 E      Course Out: N 35-57-38 W  
RP North: 4601.49                      East: 5207.50  
End North: 4625.77                      East: 5189.88

Perimeter: 456.76      Area: 13,053 S.F. 0.30 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01                      Course: N 36-08-37 W  
Error North: 0.006                      East: -0.004  
Precision 1: 59,928.10

**Lot name: LOT 9**

North: 5025.50                      East: 5055.23  
Line Course: S 48-20-49 E Length: 21.34  
North: 5011.32                      East: 5071.18  
Line Course: S 21-13-59 W Length: 140.78  
North: 4880.10                      East: 5020.19  
Line Course: S 47-27-06 E Length: 67.50  
North: 4834.45                      East: 5069.92  
Line Course: S 52-09-58 E Length: 47.08

North: 4805.58	East: 5107.10
Line Course: S 41-47-51 E	Length: 58.07
North: 4762.29	East: 5145.81
Line Course: S 73-10-39 W	Length: 54.30
North: 4746.57	East: 5093.83
Line Course: S 21-13-59 W	Length: 78.81
North: 4673.11	East: 5065.29
Line Course: N 88-02-26 W	Length: 109.54
North: 4676.86	East: 4955.81
Line Course: S 21-13-59 W	Length: 64.55
North: 4616.69	East: 4932.44
Line Course: S 39-35-16 E	Length: 162.42
North: 4491.52	East: 5035.94
Line Course: S 63-16-39 E	Length: 107.33
North: 4443.26	East: 5131.81
Line Course: N 60-43-40 E	Length: 107.63
North: 4495.88	East: 5225.69
Line Course: N 60-43-40 E	Length: 20.05
North: 4505.69	East: 5243.18
Line Course: S 33-09-50 E	Length: 45.51
North: 4467.59	East: 5268.08
Line Course: S 79-10-23 E	Length: 149.98
North: 4439.42	East: 5415.39
Line Course: S 06-31-32 W	Length: 159.48
North: 4280.97	East: 5397.26
Line Course: N 68-46-01 W	Length: 1701.85
North: 4897.32	East: 3810.94
Line Course: N 08-23-20 W	Length: 700.61
North: 5590.43	East: 3708.73
Line Course: S 46-44-00 E	Length: 44.06
North: 5560.23	East: 3740.81
Line Course: S 40-39-26 E	Length: 47.54
North: 5524.17	East: 3771.79
Line Course: S 49-21-08 E	Length: 28.22
North: 5505.78	East: 3793.20
Line Course: S 53-03-25 E	Length: 57.69
North: 5471.11	East: 3839.31
Line Course: S 58-00-17 E	Length: 104.89
North: 5415.54	East: 3928.26
Line Course: S 68-11-11 E	Length: 48.25
North: 5397.61	East: 3973.06
Line Course: S 66-55-35 E	Length: 121.53
North: 5349.98	East: 4084.87
Line Course: S 62-09-10 E	Length: 64.79
North: 5319.71	East: 4142.15
Line Course: S 72-00-32 E	Length: 37.83

North:	5308.03	East:	4178.13
Line Course:	S 78-32-25 E	Length:	17.39
North:	5304.57	East:	4195.18
Line Course:	S 89-50-42 E	Length:	92.75
North:	5304.32	East:	4287.93
Line Course:	N 85-39-18 E	Length:	98.80
North:	5311.81	East:	4386.44
Line Course:	N 73-32-33 E	Length:	56.73
North:	5327.88	East:	4440.85
Line Course:	S 38-12-42 E	Length:	133.13
North:	5223.27	East:	4523.20
Line Course:	S 38-07-32 E	Length:	161.02
North:	5096.61	East:	4622.61
Line Course:	S 88-40-13 E	Length:	48.00
North:	5095.49	East:	4670.60
Line Course:	N 87-31-47 E	Length:	86.44
North:	5099.22	East:	4756.96
Line Course:	S 42-10-38 E	Length:	70.66
North:	5046.85	East:	4804.40
Line Course:	S 21-13-59 W	Length:	249.18
North:	4814.59	East:	4714.16
Line Course:	S 68-46-01 E	Length:	241.55
North:	4727.11	East:	4939.31
Line Course:	N 21-13-59 E	Length:	15.00
North:	4741.09	East:	4944.74
Line Course:	S 68-46-01 E	Length:	117.00
North:	4698.72	East:	5053.80
Line Course:	N 21-13-59 E	Length:	100.00
North:	4791.93	East:	5090.02
Line Course:	N 68-46-01 W	Length:	117.00
North:	4834.30	East:	4980.96
Line Course:	N 21-13-59 E	Length:	205.12
North:	5025.50	East:	5055.24

Perimeter: 6161.39 Area: 698,813 S.F. 16.04 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01 Course: S 58-55-33 E  
Error North: -0.007 East: 0.011  
Precision 1: 479,674.73

Lot name: PARCEL X

North: 4762.28	East: 5145.81
Line Course: S 28-20-23 E	Length: 97.24
North: 4676.70	East: 5191.97
Curve Length: 34.86	Radius: 30.00
Delta: 66-34-44	Tangent: 19.70
Chord: 32.93	Course: S 87-19-44 W
Course In: N 35-57-38 W	Course Out: S 30-37-06 W
RP North: 4700.98	East: 5174.35
End North: 4675.16	East: 5159.07
Curve Length: 61.88	Radius: 50.00
Delta: 70-54-51	Tangent: 35.61
Chord: 58.01	Course: S 85-09-41 W
Course In: S 30-37-06 W	Course Out: N 40-17-45 W
RP North: 4632.13	East: 5133.61
End North: 4670.27	East: 5101.27
Curve Length: 21.84	Radius: 50.00
Delta: 25-01-20	Tangent: 11.09
Chord: 21.66	Course: S 37-11-35 W
Course In: S 40-17-45 E	Course Out: N 65-19-05 W
RP North: 4632.13	East: 5133.61
End North: 4653.01	East: 5088.17
Line Course: N 48-42-35 W	Length: 30.46
North: 4673.11	East: 5065.29
Line Course: N 21-13-59 E	Length: 78.81
North: 4746.57	East: 5093.83
Line Course: N 73-10-39 E	Length: 54.30
North: 4762.29	East: 5145.80

Perimeter: 379.39 Area: 7,453 S.F. 0.17 acres  
Mapcheck Closure - (Uses listed courses, radii, and deltas)  
Error Closure: 0.01 Course: N 35-51-25 W  
Error North: 0.004 East: -0.003  
Precision 1: 71,387.56

**Lot name: PARCEL Y**

North: 4800.79	East: 5281.95
Line Course: N 43-36-27 W	Length: 177.32
North: 4929.19	East: 5159.65
Line Course: S 39-30-01 E	Length: 119.57
North: 4836.93	East: 5235.71
Line Course: S 39-30-01 E	Length: 72.19
North: 4781.22	East: 5281.63
Line Course: S 39-30-01 E	Length: 32.02
North: 4756.52	East: 5302.00
Line Course: S 32-04-09 E	Length: 40.09
North: 4722.54	East: 5323.28
Line Course: S 26-28-19 E	Length: 35.43
North: 4690.83	East: 5339.07
Line Course: S 26-28-19 E	Length: 29.54
North: 4664.38	East: 5352.24
Line Course: S 22-01-17 E	Length: 74.60
North: 4595.23	East: 5380.21
Line Course: S 22-01-17 E	Length: 88.23
North: 4513.43	East: 5413.30
Line Course: N 06-52-18 W	Length: 62.55
North: 4575.53	East: 5405.81
Line Course: N 17-06-42 W	Length: 70.68
North: 4643.09	East: 5385.01
Line Course: N 33-09-50 W	Length: 188.40
North: 4800.80	East: 5281.95

Perimeter: 990.61 Area: 5,186 S.F. 0.12 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)

Error Closure: 0.00 Course: N 08-17-39 E

Error North: 0.003 East: 0.000

Precision 1: 356,317.40